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Site:	West Lake Hill
Job #:	MOD 079908932
Break:	10.9.01.2
Other:	Progress Report
	1-5-96

RECEIVED

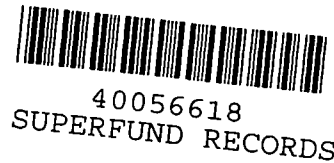
JAN 08 1996

SUPERFUND ENV.

January 5, 1996

Our Ref: 943-2848.601

U.S. Environmental Protection Agency
Region VII
WSTM/SPFD/REML
726 Minnesota Avenue
Kansas City, Kansas 66101



Attention: Mr. Steven Kinser

**RE: MONTHLY PROGRESS REPORT - DECEMBER 1995
WEST LAKE (BRIDGETON) LANDFILL
OPERABLE UNIT 2 RI/FS**

Dear Mr. Kinser:

On behalf of Laidlaw Waste Systems, Inc. (Laidlaw), Golder Associates Inc. (Golder) has prepared the following progress report in accordance with Section XIII, Paragraph 39 of the Administrative Order on Consent (Consent Order), EPA Docket No. VII-94-F-0025. The progress report describes activities conducted in December 1995.

I. ACTIONS TAKEN TO COMPLY WITH THE CONSENT ORDER

Activities conducted in December include collection of monthly water levels. Water level monitoring was expanded to include the wells previously monitored as part of Operable Unit 1. The expanded water level monitoring program was initiated to provide continued site-wide contemporaneous measurements, from which to determine direction of groundwater flow.

During December, groundwater quality samples were collected from piezometers PZ-300-AS, PZ-300-AD, PZ-300-SS; and monitoring wells S-80, I-50, and MW-107. As verbally described to EPA in a December 7, 1995 voice mail message to Steve Kinser, the off-schedule sampling of these piezometers and monitoring wells was conducted to provide timely background (upgradient) data, and to allow comparison of data from newly constructed piezometers to the previously existing monitoring wells.

II. VALIDATED RESULTS RECEIVED

The attached Table 1 lists water level data collected from the piezometers installed as part of the Operable Unit 2 RI/FS, including data collected from June through December 1995. Table 2 includes data collected from existing monitoring wells near the active solid waste landfill.

III. WORK PLANNED DURING JANUARY AND FEBRUARY 1996

Activities planned for January and February 1996 include the following:

- ▶ Continuation of the Technical Memorandum on Physical Characterization;
- ▶ Evaluation of off-schedule groundwater quality sampling results, when received; and,
- ▶ Collection of monthly water levels.

A November 29, 1995 letter to EPA discussed the rationale for a proposed extension in delivery of the Technical Memorandum on Physical Characterization. EPA is currently evaluating the proposed schedule extension.

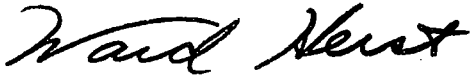
IV. MATERIAL PROBLEMS ENCOUNTERED OR ANTICIPATED MATERIAL DELAYS

No material delays were encountered in December, and none are anticipated for January or February, other than the proposed schedule extension for the Technical Memorandum on Physical Characterization.

If you have any questions or comments, please contact Mr. Doug Borro, the Respondent's designated Project Coordinator, or the undersigned.

Sincerely,

GOLDER ASSOCIATES INC.



Ward E. Herst, CPHG, CEM
Program Director - Hydrology
Associate

WEH/ked

cc: Michael Hockley, Esq., Spencer Fane Britt & Browne
Doug Borro, Laidlaw Waste Systems, Inc.
Doug Wagner, Laidlaw Waste Systems, Inc.
Larry Giroux, Laidlaw Waste Systems, Inc.
Jalal El-Jayyoufi - Missouri Department of Natural Resources

TABLE 1
GROUNDWATER, LEACHATE AND SURFACE WATER ELEVATION SUMMARY
WEST LAKE LANDFILL OU-2

Monitoring Location	Date						
	June 27, 1995	July 26, 1995	Aug. 26, 1995	Sept. 30, 1995	Oct. 30, 1995	Nov. 18, 1995	Dec. 14, 1995
	Groundwater Elevation						
Shallow Alluvial Piezometers							
PZ-112-AS	436.12	435.12	434.67	432.84	432.13	431.84	431.15
PZ-113-AS	435.64	435.30	434.63	432.91	432.19	431.81	431.18
PZ-114-AS	435.94	435.35	434.90	433.06	432.11	431.93	431.23
PZ-205-AS	434.41	434.33	434.06	432.52	431.90	431.66	431.19
PZ-207-AS	435.94	435.41	434.91	433.02	432.29	431.87	431.19
PZ-300-AS	NA	NA	NA	NA	436.41	435.50	434.94
PZ-302-AS	NA	NA	NA	NA	432.34	432.08	431.86
PZ-303-AS	NA	NA	NA	NA	432.19	432.01	431.74
PZ-304-AS	NA	NA	NA	NA	432.19	431.91	431.63
Intermediate Alluvial Piezometers							
PZ-302-AI	NA	NA	NA	NA	432.16	432.00	431.73
PZ-304-AI	NA	NA	NA	NA	432.19	431.98	431.66
PZ-305-AI	NA	NA	NA	NA	431.10	431.80	431.34
Deep Alluvial Piezometers							
PZ-113-AD	435.68	435.13	433.74	432.89	432.28	431.82	431.18
PZ-300-AD	NA	NA	NA	NA	432.89	432.78	432.41
St. Louis/Upper Salem Hydrologic Unit Piezometers							
PZ-100-SS	405.36	416.06	415.23	414.35	414.04	413.85	413.68
PZ-101-SS	393.23	394.58	393.37	390.00	388.96	387.58	386.76
PZ-102-SS	413.54	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive

Notes provided on page 4

TABLE 1
GROUNDWATER, LEACHATE AND SURFACE WATER ELEVATION SUMMARY
WEST LAKE LANDFILL OU-2

Monitoring Location	Date						
	June 27, 1995	July 26, 1995	Aug. 26, 1995	Sept. 30, 1995	Oct. 30, 1995	Nov. 18, 1995	Dec. 14, 1995
	Groundwater Elevation						
St. Louis/Upper Salem Hydrologic Unit Piezometers--Continued							
PZ-102R-SS	403.09	424.30	424.87	422.80	421.99	421.63	420.78
PZ-103-SS	363.03	373.02	363.73	360.95	360.69	361.05	360.15
PZ-104-SS	340.67	360.04	366.22	361.01	360.34	360.41	360.55
PZ-105-SS	336.26	339.83	352.45	346.80	343.23	342.76	342.53
PZ-106-SS	359.72	357.60	364.20	349.41	350.41	350.01	342.64
PZ-107-SS	434.52	434.30	434.00	432.36	431.91	431.57	431.12
PZ-108-SS	368.99	368.99	367.02	352.14	355.88	356.78	347.44
PZ-109-SS	370.70	373.74	360.45	359.20	354.64	355.12	351.80
PZ-110-SS	413.76	433.53	433.27	431.57	430.93	430.58	430.11
PZ-113-SS	435.70	435.23	434.79	433.00	432.29	431.94	427.33
PZ-115-SS	426.75	424.83	424.18	417.06	413.09	411.71	407.86
PZ-116-SS	NA	346.79	356.46	338.17	333.08	331.43	330.07
PZ-200-SS	415.05	415.45	415.59	414.38	413.34	412.78	412.91
PZ-201-SS	456.42	455.53	454.86	453.55	453.14	452.98	452.80
PZ-201A-SS	415.03	414.63	414.38	412.94	412.85	412.57	412.12
PZ-202-SS	444.36	444.78	444.14	441.33	440.20	439.70	439.13
PZ-203-SS	(Dry)	(Dry)	(Dry)	(Dry)	(Dry)	(Dry)	(Dry)
PZ-204-SS	442.82	441.49	438.10	431.82	429.64	430.57	429.71
PZ-204A-SS	NA	405.65	405.53	404.05	403.82	403.55	403.45
PZ-205-SS	424.46	424.04	423.45	421.75	421.69	421.28	420.50

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WEST LAKE LANDFILL OU-2

Monitoring Location	Date						
	June 27, 1995	July 26, 1995	Aug. 26, 1995	Sept. 30, 1995	Oct. 30, 1995	Nov. 18, 1995	Dec. 14, 1995
	Groundwater Elevation						
St. Louis/Upper Salem Hydrologic Unit Piezometers--Continued							
PZ-206-SS	420.04	419.04	418.22	415.49	415.34	415.19	NA
PZ-208-SS	NA	436.44	435.60	431.63	429.86	428.83	426.97
PZ-300-SS	NA	NA	NA	NA	428.62	428.32	427.80
PZ-301-SS	NA	NA	NA	NA	358.09	357.19	384.19
PZ-1201-SS	NA	392.33	365.30	377.98	375.25	374.88	374.88
MW-1204	333.83	330.01	357.27	305.57	324.30	303.18	309.24
MW-1205	352.28	357.38	296.81	341.10	347.04	317.88	337.07
MW-1206	368.19	367.12	367.86	351.67	361.31	362.46	348.15
Deep Salem Piezometers							
PZ-100-SD	394.61	370.68	381.79	366.35	363.78	364.43	356.68
PZ-104-SD	359.05	356.64	362.97	344.33	341.68	341.90	339.05
PZ-106-SD	358.64	353.52	361.98	348.44	346.40	347.38	340.60
PZ-111-SD	373.70	423.87	428.55	432.22	431.90	431.47	430.93
Keokuk Piezometers							
PZ-100-KS	438.17	438.93	437.84	434.72	433.90	433.67	432.84
PZ-104-KS	444.63	444.74	444.27	441.98	440.99	440.77	440.42
PZ-106-KS	442.18	442.51	442.48	440.30	439.47	439.02	438.82
PZ-111-KS	441.58	441.91	442.01	440.39	439.68	439.14	438.85

Notes provided on page 4

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GROUNDWATER, LEACHATE AND SURFACE WATER ELEVATION SUMMARY
WEST LAKE LANDFILL OU-2

Monitoring Location	Date						
	June 27, 1995	July 26, 1995	Aug. 26, 1995	Sept. 30, 1995	Oct. 30, 1995	Nov. 18, 1995	Dec. 14, 1995
	Leachate Elevation						
Leachate Risers							
LR-100	NA	NA	NA	NA	450.68	450.42	449.90
LR-102	NA	NA	NA	NA	454.07	452.38	452.31
LR-103	NA	NA	NA	NA	432.10	431.86	431.32
LR-104	NA	NA	NA	NA	432.04	432.20	431.35
LR-105	NA	NA	NA	NA	451.81	452.44	452.38
Surface Water Elevation							
Staff Gauges							
SG-8	NA	NA	NA	NA	435.08	435.46	436.25
SG-9	NA	NA	NA	NA	435.08	435.46	436.25

NOTES:

NA = Not available. Water level data was not collected on the indicated date either because the piezometer, leachate riser, or staff gauge had not yet been installed, or development was not yet completed. An equipment malfunction prevented measurement of the water level in PZ-206-SS on December 14, 1995. Water level data for existing monitoring wells was collected by Golder beginning in December 1995.

PZ-102-SS was replaced by PZ-102R-SS, and is inactive.

LR-101 was not installed because leachate was not present.

All elevations provided in feet above Mean Sea Level (MSL)

TABLE 2
GROUNDWATER ELEVATION SUMMARY
EXISTING MONITORING WELLS
WEST LAKE LANDFILL OU-2

Monitoring Location	Date
	Dec. 14, 1995
	Groundwater Elevation
Shallow Alluvial Monitoring Wells	
S-1	431.19
S-5	431.31
S-8	431.01
S-11	430.87
S-51	431.91
S-53	431.79
S-61	431.20
S-75	432.76
S-80	434.61
MW-FIS	431.36
MW-101	428.33
Intermediate Alluvial Monitoring Wellks	
I-2	431.01
I-4	431.25
I-7	435.07
I-9	431.27
I-50	432.38
I-62	431.03
I-65	431.08
I-66	431.13
I-67	431.18
I-68	431.18
I-73	430.71
Deep Alluvial Monitoring Wells	
D-3	431.30
D-6	431.14
D-10	431.18
D-12	431.15
D-13	431.14
D-14	429.35
D-81	431.81
D-83	431.02
D-85	424.79
D-87	431.73
D-93	429.88
MW-FID	428.29